

$$4) y = -x(x-3)(x+7)$$

Find the roots:

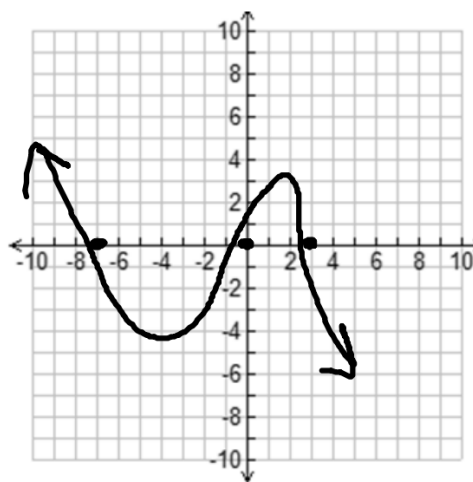
$$-x = 0 \Rightarrow x = 0$$

$$x-3 = 0 \Rightarrow x = 3$$

$$x+7 = 0 \Rightarrow x = -7$$

$$y \text{ int} = x = 0$$

$$(0, 0)$$



---


$$\text{E.B. } -x^3 = \text{odd} \ominus \uparrow \downarrow$$

## Bellwork 2/8/13

$$y = x(x-2)(x+4)$$

Step 1: Find the roots

$$x = 0$$

$$x - 2 = 0$$

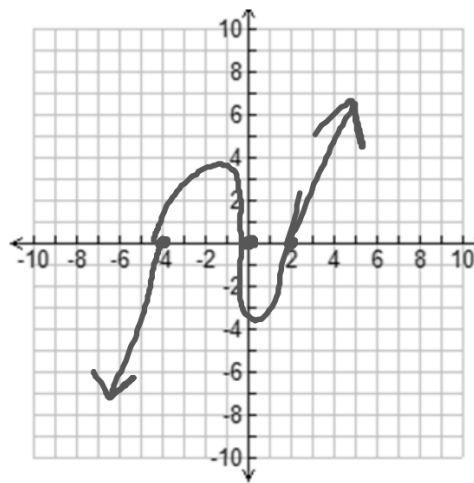
$$x = 2$$

$$x + 4 = 0$$

$$x = -4$$

Step 2: Find y-intercept ( $x=0$ )

$$0(0-2)(0+4) = 0$$



Step 3: Determine end behavior

$$x^3 = \text{odd } (+) \quad \downarrow \uparrow$$

Graph!

5)  $y = -x(x-1)(x+1)(x-5)$

Find the roots:

$-x = 0$

$x-5=0$

$x-1=0$

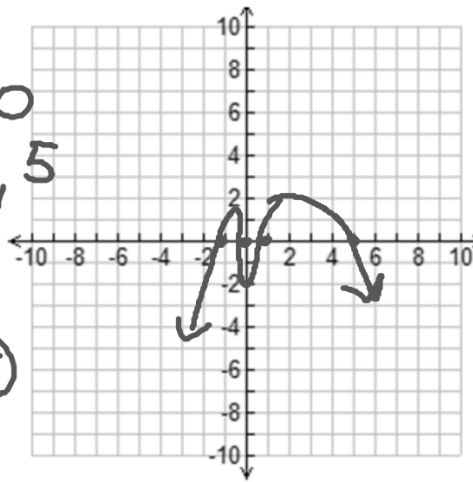
$x=0, 1, -1, 5$

$x+1=0$

y intercept (x=0)

$-0(0-1)(0+1)(0-5)$

$(0,0)$



E.B.

$-x^4$

$\Rightarrow \text{even } \odot$



$$6) y = (x+1)(x-2)(x-3)(x+3)(x-1)$$

Find the roots:

$$x+1=0 \Rightarrow x=-1$$

$$x-2=0 \Rightarrow x=2$$

$$x-3=0 \Rightarrow x=3$$

$$x+3=0 \Rightarrow x=-3$$

$$x-1=0 \Rightarrow x=1$$

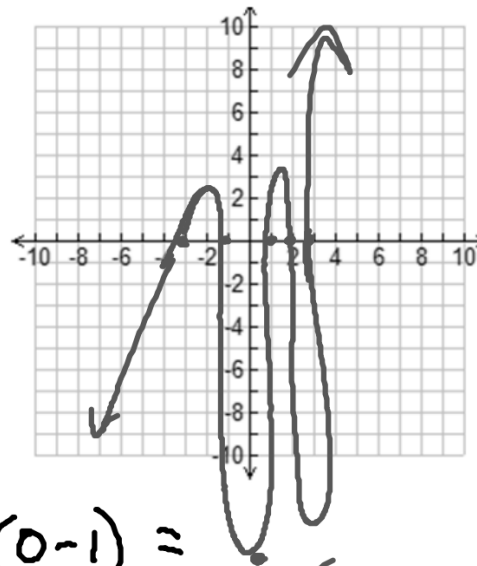
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$$y \text{ int } (x=0)$$

$$(0+1)(0-2)(0-3)(0+3)(0-1) =$$

$$(1)(-2)(-3)(3)(-1) = -18 \quad (0, -18)$$

$$E.B = x^5 \Rightarrow \text{odd} \oplus = \downarrow \uparrow$$



**Homework:** pg 293 #13-18